

Brut, LLC

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1. INTRODUCTION:

The purpose for this document is to define all parameters needed for the full processing of orders by an external system that interfaces via the Brut FIX API with the Brut Order Book. The external system is allowed to Enter Order, Cancel Order, Cancel/Replace Order, Brut Only Order, Through Brut Order, Cross Order, Hunter Order, Market/Marketable Limit Order, Discretion Order, Pegging Order, Directed Cross order, Aggressive Cross order, and Super Aggressive Cross order. The Brut system will respond with the following messages: Reject, Cancel, Expire, Replace, Partially Fill, or Fill of the order.

The Brut FIX API supports trading in the Brut Order Book of securities that are listed on NASDAQ, NYSE, and Amex. Via the Brut Liquidity Finder (Brut's smart router) orders can be routed to external destinations, such as ECNs or the NASDAQ Market Center for NASDAQ listed securities, and to the NASDAQ Market Center, ITS, or NYSE SuperDOT for exchange-listed securities.

The Brut API is implemented based on the FIX protocol using TCP/IP. The FIX version supported is FIX.4.0 as described in the FIX Document (FIX Protocol Version 4.0, January 10, 1997). This document will address the specific application requirements for message flow and field specification for complete handling of orders that are processed on the Brut system.

1.1 Order Entry:

All orders entered into the Brut system are assigned a display order quantity that is indicated with the MaxFloor field (TAG 111). The MaxFloor field determines what portion of the total order quantity is displayed in the Brut Order Book. The balance of the total order quantity (indicated with the OrderQty field; TAG 38) is placed in reserve. Each execution against the order will reduce the reserve amount until the reserve amount is depleted.

For after market trading, IOC, GTX and GTT are the only TimeInForce (TAG 59) allowed. GTT orders are converted to IOC when routing via SuperDOT.

1.2 Order Cancel:

All open shares in the order are canceled. If the order was routed to an alternate exchange, then the acknowledging cancellation message is not sent until all shares of the order are accounted for by Brut.

When multiple cancel request messages for the same order arrive to Brut, the first request is sent into the servers. For each subsequent cancel request message received, a Pending Cancel message will be sent to the client for each cancel request message. This will aid the Brut backend, by only processing one cancel message for a given order. This will increase the server ability to process an increased number of orders.

Applicable alternate destinations are:

NASDAQ-Listed Securities:

NASDAQ Market Center

NASDAQ SuperMontage directed

ECNs

NYSE- or Amex-Listed Securities:

NASDAQ Market Center for exchange-listed trading

NYSE SuperDOT System

1.3 Order Cancel/Replace:

A Cancel/Replace message only has the ability to modify the following fields of an existing order: fields 111 (MaxFloor), 44 (Price), 38 (OrderQty), 9303 (RoutingInst), 9307 (PfdMktMkr), 9723 (DiscretionPx), 9887 (DiscretionQty), 40 (OrdType), 126 (ExpireTime), 18 (ExecInst), and 9374 (PeggingTicker).

For NASDAQ and exchange listed securities, the Cancel/Replace message is available when the order is either in the Brut Book or when the order is seeking liquidity on an external exchange. When the current order is seeking liquidity through the Liquidity Finder, there might be a delay between the time Brut receives the request and when the current order is all accounted for by the liquidity Finder.

Cancel/Replace Functionality

Definitions:

- A -> B Where order type 'A' is cancel replaced '->' by order type 'B'.
A -> B | C Where symbol '|' is a division between alternative order type options.

- BRUT ONLY: 40, OrdType = '2'
 9303, RoutingInst = 'B' (default)
- POST ONLY: 40, OrdType = '2'
 9303, RoutingInst = 'P'
- CROSS: 40, OrdType = '2'
 9303, RoutingInst = 'X'
- AGGRESSIVE
CROSS: 40, OrdType = '2'
 9303, RoutingInst='G'
- SUPER
AGGRESSIVE
CROSS: 40, OrdType = '2'
 9303, RoutingInst='S'
- HUNTER: 40, OrdType = '2'
 9303, RoutingInst = 'H'
- MARKET: 40, OrdType = '1'
 44, Price (Optional for market w/ limit price)
- THROUGH: 40, OrdType = '2'
 9303, RoutingInst = 'T'
 9307, PfdMktMkr
- DIRECTED
CROSS: 40, OrdType = '2'
 9303, RoutingInst = 'X'
 9307, PfdMktMkr
- PEGGING: 40, OrdType = 'P'
 18, ExecInst = 'P' | 'R'
 9374, PeggingTicker = PriceOffset
 44, Price (Optional)
- DISCRETION: 40, OrdType = '2'
 9303, RoutingInst = 'D'
 9723, DiscretionPx
 9887, DiscretionQty
 111, MaxFloor

Conditions: NASDAQ Securities

Conditions: NYSE or Amex Securities

Pre-conditions: Cancel/Replace functionality requires that order type 'A' that is cancel replaced by order type 'B' matches in: ClOrdID (Tag 11), Side (Tag 54), and Symbol (Tag 55)

CROSS_TYPE->CROSS | AGGRESSIVE CROSS | SUPER AGGRESSIVE

THRU_TYPE-> THROUGH | DIRECTED_CROSS

BRUT ONLY -> CROSS_TYPE | BRUT ONLY | MARKET | THRU_TYPE

CROSS -> CROSS_TYPE | BRUT ONLY | MARKET | THRU_TYPE

AGGRESSIVE CROSS -> CROSS_TYPE | BRUT ONLY | MARKET

SUPER AGGRESSIVE CROSS -> CROSS_TYPE | BRUT ONLY | MARKET

HUNTER -> BRUT_ONLY | CROSS_TYPE | MARKET | THRU_TYPE

THROUGH -> BRUT_ONLY | CROSS_TYPE | MARKET | THRU_TYPE

DIRECTED CROSS -> BRUT_ONLY | CROSS_TYPE | MARKET | THRU_TYPE

MARKET -> BRUT_ONLY | CROSS_TYPE | MARKET | THRU_TYPE

DISCRETION -> CROSS_TYPE | BRUT ONLY | MARKET | THRU_TYPE

PEGGING -> PEGGING | CROSS_TYPE | BRUT ONLY | MARKET | THRU_TYPE

1.4 Order Brut Only:

Description:

Brut Only orders never leave the Brut Order Book, that is, these orders are never sent to an alternate exchange for execution. The display/reserve quantities of the order can be set. These orders can trade within the Brut Book on order delivery or they can reside within Brut.

Procedure:

Assign to field 9303 (RoutingInst) the value of 'B' (default setting), also assign to field 9301 (MmkrCapacity) either:

9301	Flag	Description	Trade reporting as:
A	Agency	Agency order, only execute at NBBO	Agency
P	Principal	Principal order, can execute away from NBBO	Principal
1	Agency_away	Agency order, can execute away from NBBO	Agency
2	Principal_inside_only	Principal order, only execute at NBBO	Principal

1.5 Order Through Brut:

Description:

Through-Brut Orders are orders that are always routed to the preferred destination without crossing the Brut Order Book first. Through-Brut Orders that are directed to Brut are crossed, but never posted, in the Brut Order Book. Through-Brut Orders can be directed to the external destinations listed below. THRU Brut orders that are preferencing the New York Stock exchange via SuperDOT can post on the specialist's book. Market Orders can be preferenced to a given exchange.

Alternate destinations:

NASDAQ-Listed Securities:

NASDAQ Market Center
NASDAQ SuperMontage directed
ECNs

NYSE- or Amex-Listed Securities:

PfdMktMkr="ADOT" for New York Stock Exchange via Brut's NYSE direct link to SuperDOT
PfdMktMkr="MMID" for NASDAQ Market Maker
PfdMktMkr="SIM" to access only NASDAQ Market Makers
PfdMktMkr="NYSE" for New York Stock Exchange (via ITS)
PfdMktMkr="AMEX" for American Stock Exchange (via ITS)
PfdMktMkr="XBSE" for Boston Stock Exchange (via ITS)
PfdMktMkr="XCBO" for Chicago Board Options Exchange (via ITS)

PfdMktMkr="XCIN" for Cincinnati Stock Exchange (via ITS)
PfdMktMkr="XMSE" for Chicago Stock Exchange (via ITS)
PfdMktMkr="XPSE" for Pacific Stock Exchange (via ITS)
PfdMktMkr="XPHL" for Philadelphia Stock Exchange (via ITS)

In addition, there are special tags supported specifically for routing to the NYSE via Brut's SuperDOT link:

1. All or None
2. Fill or Kill
3. Market on Open (at the opening)
4. Market on Close
5. On Close (On Close)

Procedure:

NASDAQ-listed securities:

Regular market hours (9:30 a.m. – 4:00 p.m., Eastern Time [ET]):

TAG 9303 (RoutingInst)	TAG 40 (OrdType)	TAG 9307 (PfdMktMkr)	Destination	TAG 9375 (SMRouteFlag)	TAG 9376 (SMExecAlgorFlag)
T	2	SUMO (or, SOES)	NASDAQ Market Center (overwrite Brut Liquidity Finder)	N = SM non- directed (default value)	T = price/time
T	2	MMID	NASDAQ Market Center or ECN-Direct (Brut Liquidity Finder decides)	N = SM non- directed (default value)	T = price/time
T	2	MMID	NASDAQ Market Center or ECN-Direct (Brut Liquidity Finder decides)	P = SM preferenced	N/A
T	2	MMID	NASDAQ Market Center or ECN-Direct (Brut Liquidity Finder decides)	D = SM directed	N/A

Pre/after market hours (8:00 a.m. – 9:30 a.m. and 4:00 p.m. – 6:30 p.m., ET):

TAG 9303 (RoutingInst)	TAG 40 (OrdType)	TAG 9307 (PfdMktMkr)	Destination	TAG 9375 (SMRouteFlag)	TAG 9376 (SMExecAlgorFlag)
T	2	MMID	SuperMontage directed or	N/A	N/A

			ECN-Direct (Brut Liquidity Finder decides)		
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For NYSE special tags via SuperDOT:

special tag	Tag 9303	Tag 9307	Tag 18	Tag 40	Tag 59
All-or-none (AON)	T	NYSE	G	N/A	N/A
Fill-or-kill (FOK)	T	NYSE	N/A	N/A	4
Market on open (OPG)	T	NYSE	N/A	N/A	2
Market on close (MOC)	T	NYSE	N/A	5	N/A
On close (OCLS)	T	NYSE	N/A	A	N/A

NOTE: When using the special tags, both 9303="T" and 9307="NYSE" must be included in the order entry message. Validations will be done and orders will be rejected if these tags are not populated with these values.

1.6 Order Cross:

Description:

The order will first hit all qualified orders in the Brut Book. If remaining shares exist after scanning the Brut Order Book for execution, and the order is not marketable, the order is displayed in the Brut Order Book. When an order has open shares and the order is marketable, the order is routed via the Brut Liquidity Finder to one or several of the destinations listed below to hit all bids or asks at the same price level. If the market moves away from the order price, then the remaining shares are placed into the Brut Order Book. Brut Orders can be directed to the external destinations listed below.

Alternate Destinations:

NASDAQ-Listed Securities:

NASDAQ Market Center
 NASDAQ SuperMontage directed
 ECNs

NYSE- or Amex-Listed Securities:

NASDAQ Market Center for exchange-listed trading
 NYSE SuperDOT System

Procedure:

Set field 9303 (RoutingInst) to the value of 'X'; optionally, set field 9375 (SMRouteFlag) to the value of 'N' (default value). Optionally, set field 9376 (SMExecAlgorFlag) to 'T' (NASDAQ Market Center non-directed order executed in price/time priority). When the order is maintained in the Brut Book or the order is routed to an external destination, then the Cancel/Replace message will take effect given the other parameters of message are properly formatted and the original order is still open.

1.7 Order Hunter:

Description:

The Brut Hunter Order functionality is available for NASDAQ-listed and NYSE- or Amex-listed securities and only during regular market hours (i.e., is not available during pre or after market hours).

Hunter Order can cross the Brut Order Book as well as the NASDAQ Market Center, SuperMontage directed, or ECNs when a matching order is found. Brut Hunter Orders are never displayed in the Brut Book and are never reflected in the Brut inside quote.

Procedure:

Set field 9303 (RoutingInst) to value of 'H'. Optionally, set field 9375 (SMRouteFlag) to the value of 'N' (default value). Optionally, set field 9376 (SMExecAlgorFlag) to 'T' (NASDAQ Market Center non-directed order executed in price/time priority). Cancel and Cancel/Replace message requests are accepted.

1.8 Order Market:

Description:

The Market Order will first check the Brut Order Book to see whether a Brut order represents the inside of the market. When Brut is at the inside, the order will cross within Brut. Any remaining shares are routed via the Brut Liquidity Finder to an alternate destination that is representing a quote at the inside of the market.

Alternate Destinations:

NASDAQ-Listed Securities:

- NASDAQ Market Center
- NASDAQ SuperMontage directed
- ECNs

NYSE- or Amex-Listed Securities:

- NASDAQ Market Center for exchange-listed trading
- NYSE SuperDOT System

If the Brut Quote is not on the inside of the market, the order is routed via the Brut Liquidity Finder to the alternate destination that represents the inside of the market.

When the Liquidity Finder detects that the Brut Quote becomes the inside of the market, the Liquidity Finder will route the order back to Brut for execution against the Brut Order Book.

If field 44 (Price) is included, then the order will be a Marketable Limit order that is price-limited for crossing. The addition of this restriction is a price protection for the client against volatile market conditions.

Procedure:

Set field 40 (OrdType) to the value of '1'. The setting of field 44 (Price) is optional. Assign to field 9303 (RoutingInst) the value 'X'. Optionally, set field 9375 (SMRouteFlag) to the value of 'N' (default value). Optionally, set field 9376 (SMExecAlgorFlag) to 'T' (NASDAQ Market Center non-directed order executed in price/time priority). Cancel and Cancel/Replace messages requests are accepted.

1.9 Order Discretion:

Description:

The Brut Directed Cross Order functionality is available for NASDAQ and exchange-listed securities.

The Discretion Order has the ability to maintain a quote within the Brut Order Book while concurrently seeking liquidity in the marketplace. A displayed order quantity MaxFloor has to be established to allow for shares to be assigned into reserves. The reserve quantity is equal to the differences between the total and the displayed order quantities ($OrderQty - MaxFloor$). The discretion quantity (DiscretionQty) is equal to or less than the reserve quantity. The maximum discretion quantity, which is equal to or less than the reserve quantity, is sent to the NASDAQ Market Center, SuperMontage directed, or other ECNs via the Brut Liquidity Finder when the inside quote on NASDAQ is within the discretionary price (DiscretionPx).

Procedure:

Set field 9723 (DiscretionPx) to the absolute Price allowed for discretion. Set field 9887 (DiscretionQty) to a value equal to or less than ($OrderQty - MaxFloor$) and set field 111 (MaxFloor) to the desired show quantity for Brut Quote. Assign to field 9303 (RoutingInst) the value 'D' for discretion; optionally, set field 9375 (SMRouteFlag) to the value of 'N' (default value). Optionally, set field 9376 (SMExecAlgorFlag) to 'T' (NASDAQ Market Center non-directed order executed in price/time priority). When the order is maintained in the Brut Book or the order is routed to an external destination, then the Cancel/Replace message will take effect given the other parameters of message are properly formatted and the original order is still open.

1.10 Order Institutional Handling:

Description:

Institutional order flow needs to be accompanied with a shortname recognized by Brut. The ClientID field will need to contain the shortname value. Either SenderCompID or OnBehalfOfCompID have also to be provided. OnBehalfOfCompID is required when a single FIX connection handles multiple institutions (service bureau connection).

Procedure:

Set field 109 (ClientID) with the institutional acronym (shortname) as well as field 49 (SenderCompID) or field 115 (OnBehalfOfCompID). When OnBehalfOfCompID is used, assign the third party acronym to the SenderCompID.

1.11 Order Pegging:

Description:

The Brut Directed Cross Order functionality is available for NASDAQ and exchange-listed securities.

The Pegging Order (field 40, OrdType = P) has the ability to maintain a quote within the Brut Book pegged (or floated) relative to the NASDAQ inside market (NBBO). A Brut Pegging Order is always constrained to the Brut Book, that is, does never seek for liquidity on the Street. Also, Brut Pegging Orders at opposite sides of the market never pro-actively cross each other in the Brut Book. Brut Pegging Orders are provided in two flavors: Primary Pegging and Market Pegging. In Primary Pegging (field 18, ExecInst = R), bid peg orders are pegged to the NASDAQ inside bid (NBB), or ask peg orders are pegged to the inside ask (NBO). The Pegging Ticker size (field 9374) is equal or larger than zero and the field value of '0.01' is equal to one cent. In Market Pegging (ExecInst = P), bid peg orders are pegged to the inside ask (NBO), or ask peg orders are pegged to the NASDAQ inside bid (NBB). The Pegging Ticker size (field 9374) is always larger than zero. Price protection against market volatility is provided with field 44 (Price). For buy orders, the 'Price' indicates the maximum price that a bid peg order will float to. For sell orders, the 'Price' indicates the minimum price that a ask peg order will float to.

Procedure:

Set field 9303 (RoutingInst) to the value of 'B'. Set field 40 (OrdType) to the value of 'P'. The setting of field 44 (Price) is optional. Set field 18 (ExecInst) to the value of 'R' for Primary Pegging, or the value of 'P' for Market Pegging. Assign to field 9374 (Pegging Ticker) a value that is equal or larger than zero (for Primary Pegging), or a value that is larger than zero (for Market Pegging). Cancel/Replace and Cancel messages will be accepted.

1.12 Order Directed Cross:

Description:

The Brut Directed Cross Order functionality is available for NASDAQ and exchange-listed securities.

The Directed Cross Order is used to preference a given market maker or another ECN just like the Through-Brut Order (refer to section 1.5 Order Through Brut), except that the order is first examined against Brut's own order book for liquidity. The remaining open shares, after removing shares from the Brut book, are then routed to the preferred market maker or other ECN. Market Order is an option for this order type.

Alternate destinations:

NASDAQ-Listed Securities:

NASDAQ Market Center
NASDAQ SuperMontage directed
ECNs

NYSE- or Amex-Listed Securities:

NASDAQ Market Center for exchange-listed trading
NYSE SuperDOT System

Procedure:

Set field 9303 (RoutingInst) to the value of 'X'. Set field 9307 (PfdMktMkr) to the preferred market maker identifier or ECN identifier. For additional information, refer to section 1.5 Order Through Brut. Cancel/Replace and Cancel messages will be accepted.

1.13 Order Post-Only:

Description:

The order is only posted into Brut Book. The price and quantity of the order will be include with Brut quote at the given price level.

Procedure:

Set field 9303 (RoutingInst) to the value of 'P'. Cancel/Replace and Cancel messages will be accepted.

1.14 Order Aggressive Cross:

Description:

The Aggressive Cross Order behaves like a cross order, except once its posted in the Brut book and the market becomes crossed (but not locked), the order will actively search for liquidity from the Brut Liquidity Finder. The following is a description of the Aggressive Cross order:

The order will first hit all qualified orders in the Brut Book. If remaining shares exist after scanning the Brut Order Book for execution, and the order is not marketable, the order is displayed in the Brut Order Book. When the order is displayed and an incoming quote would cross (but not lock) against the current Brut quote, the order is routed via the Brut Liquidity Finder to one or several of the destinations listed below to hit all bids or asks at the crossed price level. If the market moves away from the crossed order price, then the remaining shares are placed back into the Brut Order Book.

Brut Orders can be directed to the external destinations listed below.

Alternate destinations:

NASDAQ-Listed Securities:

- NASDAQ Market Center
- NASDAQ SuperMontage directed
- ECNs

NYSE- or Amex-Listed Securities:

- NASDAQ Market Center for exchange-listed trading
- NYSE SuperDOT System

Procedure:

Set field 9303 (RoutingInst) to the value of 'G'. Optionally, set field 9375 (SMRouteFlag) to the value of 'N' (default value). Optionally, set field 9376 (SMExecAlgorFlag) to 'T' (NASDAQ Market Center non-directed order executed in price/time priority). When the order is maintained in the Brut Book or the order is routed to an external destination, then the Cancel/Replace message will take effect given the other parameters of message are properly formatted and the original order is still open.

1.15 Order Super Aggressive Cross:

Description:

The Super Aggressive Cross Order, behaves like the Aggressive Cross order except when posted in the Brut book and the market becomes either locked or crossed, then the order actively searches for liquidity through the Brut Liquidity Finder. Following is a description of an Super Aggressive Cross order:

The order will first hit all qualified orders in the Brut Book. If remaining shares exist after scanning the Brut Order Book for execution, and the order is not marketable, the order is displayed in the Brut Order Book. When the order is displayed and an incoming quote would lock or cross against the current Brut quote, the order is routed via the Brut Liquidity Finder to one or several of the destinations listed below to hit all bids or asks at the crossed price level. If the market moves away from the crossed order price, then the remaining shares are placed back into the Brut Order Book.

Alternate destinations:

NASDAQ-Listed Securities:

- NASDAQ Market Center
- NASDAQ SuperMontage directed
- ECNs

NYSE- or Amex-Listed Securities:

- NASDAQ Market Center for exchange-listed trading
- NYSE SuperDOT System

Procedure:

Set field 9303 (RoutingInst) to the value of 'S'. Optionally, set field 9375 (SMRouteFlag) to the value of 'N' (default value). Optionally, set field 9376 (SMExecAlgorFlag) to 'T' (NASDAQ Market Center non-directed order executed in price/time priority). When the order is maintained in the Brut Book or the order is routed to an external destination, then the Cancel/Replace message will take effect given the other parameters of message are properly formatted and the original order is still open.

2. MINIMUM REQUIREMENTS AND PREREQUISITES:

2.1 The FIX Protocol Versions Supported:

Brut API only supports version 4.0 of the FIX protocol

FIX Protocol version 4.0, January 10, 1997

2.2 HEADER FIELDS:

IP Addresses of FIX Customer for Brut:

We require you to supply all IP Addresses your company will be using for connecting into our system.

TCP Port Numbers:

Brut will listen for a connection on a TCP port number predetermined between the two parties.

Company Identification:

You will need to supply all company Ids you will send in the SenderCompID field of FIX messages.

TargetCompID:

The company ID you will send in TargetCompID for every message to Brut will be "BRUT".

SenderCompID:

The company ID you will receive in SenderCompID in every message from Brut will be "BRUT".

2.3 SESSION PROTOCOL:

FIX 4.0

Refer to FIX 4.0 Specification for details on Session Protocol.

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3. FIELD AND HEADER DEFINITIONS:

3.1 FIELD DEFINITIONS:

Field Types:	Description:
int	Sequence of digits without commas or decimals and optional sign character (ASCII characters "-" and "0" - "9").
float	Sequence of digits with an optional decimal point and sign character (ASCII characters "-" and "0" - "9"); the absence of the decimal point within the string will be interpreted as the float representation of an integer value. Brut only accepts prices of up to four digits after the decimal point, or ten thousands of a dollar (0.0001).
char	Alphanumeric free format strings, can include any character or punctuation except the delimiter. All char fields are case sensitive.
char*	Look at ClOrdID and OrigClOrdID field definition. Field must have a minimum of 4 characters and a maximum of 8 characters. "CCCCNNNN" 'C' [A-Z,0-9], represents branch 'N' [0-9], represents sequence number
date	Always expressed GMT format FIX 4.0 Date in YYYYMMDD format. Valid values YYYY = 0000-9999, YY = 00-99, MM = 01-12, DD = 01-31.
time	Always expressed GMT format FIX 4.0 Time/Date in YYYYMMDD-HH:MM:SS format. Valid values YYYY = 0000-9999, YY = 00-99, MM = 01-12, DD = 01-31, HH = 00-23, MM = 00-59, SS = 00-59.

3.2 FIX REQUIRED FIELDS:

All fields required by the protocol are required by the Brut's implementation of FIX.
Additional required fields are listed in the definition of the message type.

3.3 REQUIRED EMPTY FIELDS:

The following FIX fields are required to be omitted in order for User-Defined Fields to work properly with Brut. Since the fields correspond to the same memory location, the original FIX fields can overlay the User-Defined Fields information.

TAG	FIELD NAME	TRANS	TAG	FIELD NAME
47	Rule80A	↔	9301	MmkrCapacity
65	SymbolSfx	↔	9302	OrderPrice
21	HandlInst	↔	9303	RoutingInst
66	ListID	↔	9306	OrigOrderDate
100	ExDestination	↔	9307	PfdMktMkr
121	ForexReq	↔	9374	PeggingTicker
119	SettlCurrAmt	↔	9373	LiquidityFlag
99	StopPx	↔	9723	DiscretionPx
15	Currency	↔	9887	DiscretionQty
64	FutSettDate	↔	9375	SMRouteFlag
120	SettlCurrency	↔	9376	SMExecAlgorFlag

3.4 FIX HEADER DEFINITION:

TAG	FIELD NAME	TYPE	REQ	MAX	COMMENTS
8	BeginString	char	Y	7	"FIX.4.0"
9	BodyLength	int	Y		Length of Message
35	MsgType	char	Y		0= Heartbeat 1= Test Request 2= Resend Request 3= Reject 4= Sequence Reset 5= Logout 8= Execution Report 9= Order Cancel Reject A= Logon D= Order – Single F= Order Cancel Request G= Order Cancel/Replace Request
49	SenderCompID	char	Y	4	Assigned value by participant used to identify firm sending message.
56	TargetCompID	char	Y	4	The intended firm to receive message. Messages coming into Brut will have "BRUT" in this field.

					This field will contain the Firm to receive this message for all out going messages sent from Brut.
115	OnBehalfOfCompID	char	N		Used for firm identification where third party is involved for routing order. SenderCompID needs to contain the third party acronym.
128	DeliverToCompID	char	N		Used for firm identification where message from Brut will be sent by a third party. TargetCompID will have the third party acronym.
34	MsgSeqNum	int	Y		Message Sequence Number
50	SenderSubID	char	N	9	Participant's trader number or user name
57	TargetSubID	char	N		UNUSED
116	OnBehalfOfSubID	char	N		UNUSED
129	DeliverToSubID	char	N		UNUSED
43	PossDupFlag	char	N	1	Indicates possible retransmission of message with the same sequence number Valid values: Y = Possible duplicate N = Original transmission
97	PossResend	char	N	1	Indicates that the message may contain information that has been sent under another sequence number Valid values: Y = Possible duplicate N = Original transmission Refer to FIX Protocol Specification for more information.
52	SendingTime	time	Y		Time and Date of Message
93	SignatureLength	int	N		UNUSED
89	Signature	char	N		UNUSED
10	Checksum	int	Y	3	Three-byte simple checksum, See Specs.

3.5 TIME IN FORCE DEFINITION:

TAG	FIELD NAME	FIX VALUE	COMMENTS
59	TimeInForce	0= Day	Order entry is acceptable between (8:00am EST) and Market Close (4:00pm EST). At Market close, all Day orders expire.
		1= GTC	Good Till Cancel. Order entry is acceptable between (8:00am EST) and Market Close (4:00pm EST). At Market close, all GTC orders expire.
		2= OPG	Buy/Sell on the opening price only. Order entry is acceptable between (8:00am EST) and Market Opening (9:30am EST). (NYSE SuperDOT Only)
		3= IOC	Immediate or Cancel. Order entry is acceptable between (8:00am EST) and before the end of Extended trading (8:00pm EST).
		4= FOK	A market or limit order that must be executed at one price for the entire amount of the order immediately upon receipt (i.e., within 90 seconds of receipt), otherwise the order has nothing done. (NYSE SuperDOT Only)
		5= GTX	Good Till Crossing (Good Thru Extended Market). Order entry is acceptable after (8:00am EST) and before the end of Extended trading (8:00pm EST). At close of Extended Market, all orders expire.
		6= GTD	Good Till Date. Order entry is acceptable after (8:00am EST) and before the end of Extended trading (8:00pm EST). At close of Extended Market, all orders expire.
		6= GTT	Good Till Time. Where the ExpireTime field, tag 126, is the time when the order will expire. Order entry is acceptable after (8:00am EST) and before the end of Extended trading (8:00pm EST). At close of Extended Market, all orders expire.

3.6 LIQUIDITY FLAG DEFINITION:

The LiquidityFlag indicates how Brut executed the trade. This helps in determining how the client is billed for the trade at the end of the month. Please contact Brut Support for more information with regard to the applicable fees that are associated with these execution reason codes.

The Value column is a sequence of characters that is transmitted in the field tagged 9373 (LiquidityFlag). The LiquidityFlag will be presented to a given firm upon request and can be activated on a per session basis. The LiquidityFlag applies for ExecutionReport messages where field tag 39 (OrdStatus) is either 1 or 2 (Partial or Filled).

BRUT CODE	VALUE	DEFINITION
ERROR_CODE	00	Brut Internal execution reason was not available. The Trade within the ExecutionReport is valid.
IMPROVE_BOOK	02	Customer Order removed liquidity from Brut book, crossed with Brut initiated order
CROSSED_BOOK	17	Customer Order posted in Brut book, crossed with Brut takeout order
CROSSED_SNET	18	Customer Order posted in Brut book, crossed with incoming SNET order
SENT_QMS	19	Customer Order executed via SuperMontage directed
IMPROVE_DISBOOK	21	Customer Order removed liquidity from Brut book, crossed with Brut discretion order
DIMPROVE_BOOK	22	Customer Discretion order removed liquidity from Brut book, crossed with Brut initiated order
DIMPROVE_DISBOOK	24	Customer Discretion order removed liquidity from Brut book, crossed with Brut initiated discretion order
DCROSSED_BOOK	25	Customer Discretion order posted in Brut book, crossed with Brut takeout order
DCROSSED_SNET	26	Customer Discretion order posted in Brut book, crossed with incoming SuperMontage directed order
CROSSED_DISBOOK	27	Customer Order posted in Brut book, crossed with Brut takeout discretion order
DCROSSED_DISBOOK	28	Customer Discretion order posted in Brut book, crossed with Brut takeout discretion order
SENT_SOES	30	Customer Order executed via SuperMontage
SENT_MMID	35	Customer Order executed through direct ECN link
SENT_SMTG	40	Customer Order executed via NASDAQ Market Center
DCROSSED_SMTG	43	Customer Discretion order posted in Brut book, crossed with incoming NASDAQ Market Center order
CROSSED_SMTG	44	Customer order posted in Brut book, crossed with incoming NASDAQ Market Center order

CROSSED_CAES	49	Customer Order posted in Brut book, crossed with incoming NASDAQ Market Center for exchange-listed trading order (Listed trade only)
BOOK_OPG	50	Special case for BRUT book cross on market open
SENT_SDOT	51	Customer Order executed via SDOT (Listed trade only)
SENT_CAES	53	Customer Order executed via NASDAQ Market Center for exchange-listed trading (Listed trade only)
SENT_ITS	55	Customer Order executed via ITS (Listed trade only)

4. IN BOUND MESSAGES:

4.1 New Order Single (Inbound):

Generates a Brut Order transaction message. The new order message type is used by institutions wishing to electronically submit orders to Brut for execution.

TAG	FIELD NAME	TYPE	REQ	MAX	COMMENTS
35	MsgType	Char	Y		D= Order Single
11	CIOrdID	Char*	Y	20	Clients Order Identifier, Assigned by participant and is returned in field for every status and trade report. This identifier will need to be used in order to access this Order on Brut for other inbound messages. (See Above) MUST BE UNIQUE ACROSS ORDERS
109	ClientID	Char	N	10	Abbreviated Name of the Institution
111	MaxFloor	Int	N		Maximum number of shares within an order to be shown on the exchange floor at any given time.
55	Symbol	Char	Y	9	Security Symbol
54	Side	Char	Y		1= Buy 2= Sell 5= Sell short 6= Sell short exempt
38	OrderQty	Int	Y		Number of Shares Ordered.

40	OrdType	Char	Y	<p>1= Market 2= Limit 5= Market On Close (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE; an order to be executed at, or as near to as possible, the close of the market A= On Close (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE, and field 44 (Price) available; a limit order to be executed as close as possible to the closing price (but not worse than the stipulated limit price) P= Pegged Others rejected</p>
18	ExecInst	Char	N	<p>G= All or None (AON) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE, and field 44 (Price) available; a limit order to be executed as close as possible to the closing price (but not worse than the stipulated limit price) P= Market peg (peg bid to inside offer; peg ask to inside bid) R= Primary peg (peg bid to inside bid; peg ask to inside ask)</p>
44	Price	Float	N	<p>Price per share (Ten thousands of a dollar, 0.0001). When OrdType is Market, price field is a restriction on order executions for the inside of the market. Otherwise the whole inside of the market is game for crossing.</p>

59	TimeInForce	Char	N	<p>0= Day (Default) 1= Good Till Cancel (GTC) 2= At the Opening (OPG) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T, 9307 (PfdMktMkr) = NYSE; a Market [field 40 (OrdType) = 1] or Limit Price [field 40 (OrdType) = 2; field 44 (Price) is mandatory] Order to be executed at the opening price of the stock (but not worse than the stipulated Limit Price) or not at all; all or part of any order not executed at the opening is treated as canceled 3= Immediate or Cancel (IOC) 4= Fill or Kill (FOK) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T, 9307 (PfdMktMkr) =NYSE, and 40 (OrdType) = 2; field 44 (Price) is mandatory, that is, the order is to be executed in its entirety as soon as it is represented in the Trading Crowd at the stipulated (Limit) Price or better; if not so executed, the order is to be canceled 5= Good Till Crossing (GTX) (Good Through Extended) 6= Good Till Date (GTD) & Good Till Time (GTT)</p>
126	ExpireTime	Time	N	<p>Valid when TimeInForce is set to 6=(GTD,GTT) If the date is today's date, then the order is a GTT. If the date is in the future, then use 16:00:00 as the default time for the order to expire today (future order expiration dates are currently not supported by Brut). If the century and year equal 1800, then the time represents the offset from the current time when the order will expire. So if the time portion equals 18000101-00:10:30, the order expires in 630 seconds (maximum order expiration time currently supported is 00:59:59).</p>

63	SettlmntTyp	Char	N		Indicates order settlement period. Absence of this field is interpreted as Regular. Valid Values: 0= Regular
114	LocateReqd	Char	N		Indicates whether the broker is to locate the stock in conjunction with a short sell order. Valid Values: Y=Indicates the broker is responsible for locating the stock. N=Indicates the broker is not required to locate.
9301	MmkrCapacity	Char	N		Capacity, Broker market maker indicator. Orders of type agency only cross when at best executable price within the market. Principle orders are executed at limit price or better, therefore a trade can be made which is through the current market price. Valid values: A = Agency (Default) P = Principle 1 = Agency, execute away from the inside 2 = Principle, execute at inside only
9303	RoutingInst	Char	N		Routing Instructions for order handling on Brut trading floor. Valid values: B= Automated execution order, private, no Broker intervention. (default) D= Discretion Order H= Hunter Order will search for liquidity within Brut book as well as an external exchange to seek fill T= Through Brut without trying Brut; (Brut Client can choose how to route the order by indicating field 9307 (PfdMktMkr) with the proper destination identifier; please refer to section <u>1.5 Order Through Brut</u> in this document for more information) X= Order Cross, Cross with Brut first and if order is marketable, then go out to an alternate exchange to seek fill. If order is not marketable, then post residual in Brut Book X= Order Directed Cross, must be accompanied by field 9307 (PfdMktMkr)

					<p>with the proper destination identifier. The order will first try to cross against Brut book first, then the order will be directed to the PfdMktMkr.</p> <p>P= Order Post-Only, the order will be put into Brut book for the price and quantity of the order.</p> <p>G= Aggressive Cross Order, Cross order with an escape from Brut book when the market is either locked or crossed.</p> <p>S= Super Aggressive Cross Order, Cross order with an escape from Brut book when the market is either <u>locked</u> or crossed.</p>
9305	SponsorBkr	Char	N		The Sponsor Broker for the Institution.
9307	PfdMktMkr	Char	N		Required only with Through Brut order with field 9303 (RoutingInst) equal 'T' or Directed Cross Order with field 9303 (RoutingInst) equal 'X'. For NASDAQ-listed securities, route order to preferred MMID either SuperMontage, SuperMontage directed, or direct ECN API. For NYSE- and Amex-listed securities, route order that is preferred to NASDAQ Market Center for exchange-listed trading market makers or regional exchanges via NASDAQ's Market Center for exchange-listed trading. For detailed information about the proper application of the PfdMktMkr field, please refer to sections <u>1.5 Order Through Brut</u> and <u>1.12 Order Directed Cross</u> in this document.
9374	PeggingTicker	Float	N		Pegging Ticker A field value of '0.01' is equal to one cent.
9723	DiscretionPx	Float	N		Discretion price must be better than Price. The price is an absolute value.
9887	DiscretionQty	Int	N		Discretion quantity must be less than or equal to reserve quantity, i.e. $DiscretionQty \leq (OrderQty - MaxFloor)$.
9375	SMRouteFlag	Char	N	1	NASDAQ's Market Center supports three type of orders: N=Non-directed (default value); a specific party which the order should be delivered to or executed against has not to be identified

					P=Preferred; the order must designate in field 9307 (PfdMktMkr) the quoting market participant against which the order is to be executed or delivered D=Directed; order bypasses NASDAQ Market Center and is processed through SuperMontage directed. The order must designate in field 9307 (PfdMktMkr) the quoting market participant against which the order is delivered
9376	SMExecAlgor Flag	Char	N	1	This value is only applicable if field 9375 (SMRouteFlag) equals N (for NASDAQ Market Center non-directed orders). Participants entering non-directed orders can specify the NASDAQ Market Center system prioritization algorithm that will apply to that order. NASDAQ's Market Center supports three type of algorithms: T=Price/Time priority

4.2 Order Cancel/Replace Request (Inbound):

Generates a Brut Order Replace Transaction message. Used to replace an existing order.

TAG	FIELD NAME	TYPE	REQ	MAX	COMMENTS
35	MsgType	char	Y		G= Order Cancel/Replace Request
37	OrderID	Int	N		Clients Order Identifier, Assigned by participant and is returned in field for every status and trade report.
109	ClientID	Char	N	10	Abbreviated Name of the Institution
41	OrigClOrdID	Char*	Y	20	Original Order identifier assigned by institution application. (See Above) MUST MATCH ORIGINAL ORDER, ClOrdID field
11	ClOrdID	Char*	Y	20	Unique identifier of replacement order as assigned by institution. The identifier is used by the system to retrieve the original order to replace. (See Above) MUST BE UNIQUE ACROSS ORDERS
55	Symbol	Char	Y	9	Security Symbol

54	Side	Char	Y	Must be the same as Original Order 1= Buy 2= Sell 5= Sell short 6= Sell short exempt
111	MaxFloor	Int	N	Maximum number of shares within an order to be shown on the exchange floor at any given time.
38	OrderQty	Int	Y	Number of shares of new order, including all canceled, and executed shares of previous order.
40	OrdType	Char	Y	1= Market 2= Limit 5= Market On Close (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE; an order to be executed at, or as near to as possible, the close of the market A= On Close (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE, and field 44 (Price) available; a limit order to be executed as close as possible to the closing price (but not worse than the stipulated limit price) P= Pegged
18	ExecInst	Char	N	G= All or None (AON) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE, and field 44 (Price) available; a limit order to be executed as close as possible to the closing price (but not worse than the stipulated limit price) P= Market peg (peg bid to inside offer; peg ask to inside bid) R= Primary peg (peg bid to inside bid; peg ask to inside ask)

44	Price	Float	N	Customer price per share (Ten thousands of a dollar, 0.0001). Can be different than Original Order. When OrdType is Market, price field is a restriction on order executions for the inside of the market. Otherwise the whole inside of the market is game for crossing.
59	TimeInForce	Char	N	<p>0= Day (Default)</p> <p>1= Good Till Cancel (GTC)</p> <p>2= At the Opening (OPG) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T, 9307 (PfdMktMkr) = NYSE; a Market [field 40 (OrdType) = 1] or Limit Price [field 40 (OrdType) = 2; field 44 (Price) is mandatory] Order to be executed at the opening price of the stock (but not worse than the stipulated Limit Price) or not at all; all or part of any order not executed at the opening is treated as canceled</p> <p>3= Immediate or Cancel (IOC)</p> <p>4= Fill or Kill (FOK) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T, 9307 (PfdMktMkr) = NYSE, and 40 (OrdType) = 2; field 44 (Price) is mandatory, that is, the order is to be executed in its entirety as soon as it is represented in the Trading Crowd at the stipulated (Limit) Price or better; if not so executed, the order is to be canceled</p> <p>5= Good Till Crossing (GTX) (Good Thru Extended Market).</p> <p>6= Good Till Date (GTD) & Good Till Time (GTT)</p>
126	ExpireTime	Time	N	<p>Valid when TimeInForce is set to 6=(GTD,GTT)</p> <p>If the date is today's date, then the order is a GTT.</p> <p>If the date is in the future, then use 16:00:00 as the default time for the order to expire today (future order expiration dates are currently not supported by Brut). If the</p>

					century and year equal 1800, then the time represents the offset from the current time when the order will expire. So if the time portion equals 18000101-00:10:30, the order expires in 630 seconds (maximum order expiration time currently supported is 00:59:59).
63	SettlmntTyp	Char	N		Indicates order settlement period. Absence of this field is interpreted as Regular. Valid values: 0= Regular
114	LocateReqd	Char	N		Indicates whether the broker is to locate the stock in conjunction with a short sell order. Valid Values: Y=Indicates the broker is responsible for locating the stock. N=Indicates the broker is not required to locate.
9301	MmkrCapacity	Char	N		Capacity, Broker market maker indicator. Orders of type agency only cross when at best executable price within the market. Principle orders are executed at limit price or better, therefore a trade can be made which is through the current market price. Valid values: A = Agency (Default) P = Principle 1 = Agency, execute away from the inside 2 = Principle, execute at inside only
9302	OrderPrice	Float	N		Customer price per share of Original Order, The Price to Cancel, (Ten thousands of a dollar, 0.0001).
9303	RoutingInst	Char	N		Routing Instructions for order handling on Brut trading floor. Valid values: B= Automated execution order, private, no Broker intervention. (default) D= Discretion Order X= Order Cross, Cross with Brut first and if order is marketable, then go out to an alternate exchange to seek fill. If order is not marketable, then post residual in Brut Book T= Through Brut without trying Brut (only

					<p>for Exchange listed securities) P= Order Post-Only, the order will be put into Brut book for the price and quantity of the order. G= Aggressive Cross Order, Cross order with an escape from Brut book when the market is either locked or crossed. S= Super Aggressive Cross Order, Cross order with an escape from Brut book when the market is either <u>locked</u> or crossed.</p>
9305	SponsorBkr	Char	N		The Sponsor Broker for the Institution.
9306	OrigOrderDate	Date	N		Date the Original Order was accepted on Brut.
9374	PeggingTicker	Float	N		Pegging Ticker A field value of '0.01' is equal to one cent.
9723	DiscretionPx	Float	N		Discretion price must be better than Price. The price is an absolute value.
9887	DiscretionQty	Int	N		Discretion quantity must be less than or equal to the reserve quantity, i.e. $DiscretionQty \leq (OrderQty - MaxFloor)$.
9375	SMRouteFlag	Char	N	1	<p>NASDAQ's Market Center supports three type of orders: N=Non-directed (default value); a specific party which the order should be delivered to or executed against has not to be identified P=Preferred; the order must designate in field 9307 (PfdMktMkr) the quoting market participant against which the order is to be executed or delivered D=Directed; order bypasses NASDAQ Market Center and is processed through SuperMontage directed. The order must designate in field 9307 (PfdMktMkr) the quoting market participant against which the order is delivered</p>

9376	SMExecAlgor Flag	Char	N	1	This value is only applicable if field 9375 (SMRouteFlag) equals N (for NASDAQ Market Center non-directed orders). Participants entering non-directed orders can specify the NASDAQ Market Center system prioritization algorithm that will apply to that order. NASDAQ's Market Center supports three type of algorithms: T=Price/Time priority
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4.3 Order Cancel Request (Inbound):

Generates a Brut Order Cancel Transaction message. Used to request the cancellation of all or part of the remaining quantity of an existing order.

TAG	FIELD NAME	TYPE	REQ	MAX	COMMENTS
35	MsgType	Char	Y		F= Order Cancel Request
41	OrigClOrdID	Char*	Y	20	Original Order identifier assigned by institution application. (See Above) MUST MATCH ORIGINAL ORDER, ClOrdID field
11	ClOrdID	Char*	Y	20	Clients Order Identifier, Assigned by participant and is returned in field for every status and trade report. MUST BE UNIQUE ACROSS ORDERS (See Above)
109	ClientID	Char	N	10	Abbreviated Name of the Institution
55	Symbol	Char	Y	9	Security Symbol
54	Side	Char	Y		1= Buy 2= Sell 5= Sell short 6= Sell short exempt
38	OrderQty	Int	Y		Cancel Quantity
125	CxlType	Char	Y		Cancel the remaining quantity of an order. Valid values: F= full remaining quantity
9302	OrderPrice	Float	N		Customer price per share of Original Order, The Price to Cancel, (Ten thousands of a dollar, 0.0001).
9305	SponsorBkr	Char	N		The Sponsor Broker for the Institution.
9306	OrigOrderDate	Date	N		Date the Original Order was accepted on Brut.

5. OUT BOUND MESSAGES:

5.1 Execution Report (Outbound):

The Execution Report handles all the reporting of an order. Two fields ExecTransType and OrdStatus are used to determine the event taking place with the order. The ExecTransType can be 0 (New). The ExecTransType of 0 (New) indicates that the status of an order has just changed and OrdStatus indicates how it has changed.

Orders can have the following status: New, Partially filled, Filled, Canceled, Replaced, Rejected, or Expired. New: Acknowledgement of receiving a new order. Partially filled, Filled: an order has been either partially or fully traded. Canceled, Replaced: Response messages for successfully receiving and processing an Order Cancel Request or Order Cancel/Replace Request respectively. Rejected: Message indicating one of the following errors has occurred: format is incorrect, MaxFloor or price is invalid. Expired: The order has expired.

TAG	FIELD NAME	TYPE	REQ	MAX	COMMENTS
35	MsgType	Char	Y		8= Execution Report
49	SenderCompID	Char	Y	4	"BRUT"
56	TargetCompID	Char	Y	4	Executing Broker Symbol
6	AvgPx	Float	Y		Execution Price or Price of Last fill
31	LastPx	Float	Y		Execution Price or Price of Last fill
37	OrderID	Int	Y		The Brut Order Identifier
76	ExecBroker	Char	Y	4	Executing Broker Symbol
17	ExecID	Int	Y		Brut reference number.
20	ExecTransType	Char	Y		0= New
39	OrdStatus	Char	Y		0= New 1= Partially filled 2= Filled 4= Canceled or UROUT 5= Replaced 6= Pending Cancel 8= Rejected C= Expired
55	Symbol	Char	Y	9	Security Symbol

11	ClOrdID	Char*	Y	20	Required for executions against electronically submitted orders which were assigned an ID by the institution. Original Order identifier assigned by institution application. Assigned on Brut either in 'Order Cancel/Replace Request' or 'Order Single' messages. FIX 4.0: Refer to OrigSendingTime for date of original order. Will match original order (See Above)
54	Side	Char	Y		1= Bought 2= Sold 5= Sold short 6= Sold short exempt
29	LastCapacity	Char	N		1= Agent 4= Principal
32	LastShares	Int	Y		Quantity of shares bought/sold on this fill
38	OrderQty	Int	Y		Original Number of Shares in Order.
14	CumQty	Int	Y		Total number of Shares filled.
109	ClientID	Char	N	10	Abbreviated Name of the Institution
40	OrdType	Char	Y		1= Market 2= Limit 5= Market On Close (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE; an order to be executed at, or as near to as possible, the close of the market A= On Close (NYSE DOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE, and field 44 (Price) available; a limit order to be executed as close as possible to the closing price (but not worse than the stipulated limit price) P= Pegged
18	ExecInst	Char	N		G= All or None (AON); (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T and 9307 (PfdMktMkr) = NYSE, and field 44 (Price) available; a limit order to be executed as close as possible to the

					closing price (but not worse than the stipulated limit price) P= Market peg (peg bid to inside offer; peg ask to inside bid) R= Primary peg (peg bid to inside bid; peg ask to inside ask)
64	FutSettDate	Date	N		Settlement Date
60	TransactTime	Time	N		Time of Transaction
57	TargetSubID	Char	Y	4	Clients' Trader Number received in original order.
50	SenderSubID	Char	N	9	The Brut User Login name.
44	Price	Float	N		Price per share (Ten thousands of a dollar, 0.0001)
59	TimeInForce	Char	N		0= Day (Default) 1= Good Till Cancel (GTC) 2= At the Opening (OPG) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T, 9307 (PfdMktMkr) = NYSE; a Market [field 40 (OrdType) = 1] or Limit Price [field 40 (OrdType) = 2; field 44 (Price) is mandatory] Order to be executed at the opening price of the stock (but not worse than the stipulated Limit Price) or not at all; all or part of any order not executed at the opening is treated as canceled 3= Immediate or Cancel (IOC) 4= Fill or Kill (FOK) (NYSE SuperDOT Only); only allowed for exchange listed orders with fields 9303 (RoutingInst) = T, 9307 (PfdMktMkr) = NYSE, and 40 (OrdType) = 2; field 44 (Price) is mandatory, that is, the order is to be executed in its entirety as soon as it is represented in the Trading Crowd at the stipulated (Limit) Price or better; if not so executed, the order is to be canceled 5= Good Till Crossing (GTX) (Good Thru Extended Market). 6= Good Till Date (GTD) & Good Till Time (GTT)

113	ReportToExch	Char	N		How reporting is done to NASDAQ N= Firm does not report Trade to NASDAQ Y= Firm reports Trade to NASDAQ
103	OrdRejReason	Int	N		<p>If (OrdStatus= 8, Reject) Then</p> <ul style="list-style-type: none"> 0= Broker Option 1= Unknown symbol 2= Exchange closed 3= Order exceeds limit 4= Too late to enter <p>(Optional)</p> <ul style="list-style-type: none"> 101= Order Cross Price Change 102= Order Cross the market 103= Market Close at 4pm 104= Security Halted 105= Liquidity Finder Down 106= Desk Rejection 107= Odd Lot Rejection <p>(NYSE, Amex, or CAES/ITS listed securities)</p> <ul style="list-style-type: none"> 108= IOC of extra shares 109= Illegal SSHRT 110= Liquidity Finder Time Out 111= Liquidity Finder NASDAQ Reject 112= Liquidity Finder SDP Down 113= Liquidity Finder Decline 114= No Market for Market Order 115= Exchange Closed! 116= Unknown Security! 117= Invalid Price! 118= Invalid Quantity! 119= Invalid TIF! 120= Invalid PegOrder! 121= Out on SNET! 122= Invalid Sponsor! 123= Invalid OrdType! 124= Invalid Server! 125= Invalid PfdMktMkr! 126= Invalid SMRouteFlag! 127= Invalid SMExecAlgorFlag! 128= Invalid Post Only! 129= Invalid LocateReqd!

58	Text	Char	N		If (OrdStatus= 8, Reject) Then Reason for Reject, Look at (Text Format)
9305	SponsorBkr	Char	N		The Sponsor Broker for the Institution.
9306	OrigOrderDate	Date	N		Date the Original Order was accepted on Brut.
9373	LiquidityFlag	Char	N		LiquidityFlag, Refer to section 3.6. Field is optionally sent only when OrdStatus equals Partially Filled or Filled.

Text Format:

The Text field contains one or more of the following 'Text Field Value', which may be accompanied with data found to be in error.

TEXT FIELD VALUE	DESCRIPTION
MsgType	D= Order – Single G= Order Cancel/Replace Request F= Order Cancel Request
ClOrdID ()	Return value is invalid.
CxlType=	Partial quantities are rejected.
ExecInst ()	Return value is invalid.
ExpireTime (>60 min)	Relative time greater than 60 minutes.
ExpireTime (Format)	Format error.
ExpireTime(Bygone)	Value given has past.
Invalid TIF	Invalid.
Invalid Quantity	Invalid.
Invalid fraction=	Return value is invalid.
Invalid MaxFloor	Invalid.
Lvsqty > OrderQty	Leaves Quantity greater than OrderQty.
OrdType ()	Return value is invalid.
OrigOrderDate REQ	Required field for Cancel, Cancel Replace.
Market Closed!	Outside trading hours or system failure.
PfdMktMkr	Required for Through Brut orders.
SenderSubID=Empty	Empty field.
SettlmntTyp ()	Return value is invalid.
Side ()	Return value is invalid.
TimeInForce=	Return value is invalid.
Broker Option!	Default Rejection Text.
Decline!	The Preference market maker Declined order request.
Desk Reject!	Desk rejected order do to NASDAQ Quote Update

	Error.
IOC Cancel!	Remaining shares of order canceled.
Lock/Cross!	Order is Locking or Crossing market when no order in Brut Book to execute.
Odd Lot Reject!	NYSE, Amex, or NASDAQ Market Center for exchange-listed trading took odd lot number of shares.
Order Timeout!	Order Expired.
SDP Down!	System Failure.
Security Halted!	Unable to obtain market maker status for security.
SNET Server Down!	System Failure.
SSHRT Down Tick!	Illegal operation.
SNET Reject!	NASDAQ Rejection occurred.
Invalid Post Only!	Order was not an acceptable Post Only order
Invalid LocateReqd	Short sell without a valid LocateReqd Field

5.2 Order Cancel Reject: TLTC & Unknown Order Response (OutBound):

This is a response to a previously received 'Order Cancel Request' or 'Order Cancel/Replace Request' that could not be satisfied for one reason or another.

TAG	FIELD NAME	TYPE	REQ	MAX	COMMENTS
35	MsgType	char	Y		9= Order Cancel Reject
49	SenderCompID	char	Y		"BRUT"
56	TargetCompID	char	Y		Broker Symbol
37	OrderID	int	Y		The Brut Order Identifier
11	ClOrdID	char*	Y	20	Required for executions against electronically submitted order which were assigned an ID by the institution. The new Order identifier assigned by institution application for 'Order Cancel Request' and 'Order Cancel/Replace Request'.
109	ClientID	char	N	10	Abbreviated Name of the Institution
76	ExecBroker	char	N		Broker Symbol
102	CxlRejReason	char	N		Code to identify reason for cancel rejection Valid values: 0 = Too Late to Cancel 1 = Unknown Order

5.3 In Bound Request Result in Outbound Messages:

The following matrices are to clarify the sequence of messages and status of an order from the processing of new orders, executions, cancellations, partial cancellations, cancel replacement of orders, and order rejections.

Order - Single:

RECV MSG/EVENT	MESSAGE SENT	EXECTRANTYPE	ORDSTATUS
NewOrder	Execution (optional)	New	New
Reject by server	Execution	New	Reject
Reject by editor	Execution	New	Reject
Partial Filled	Execution	New	Partial
Full fill	Execution	New	Filled

Order Cancel/Replace Request:

RECV MSG/EVENT	MESSAGE SENT	EXECTRANTYPE ORDSTATUS	CANREJREASON
NewOrder(X)	Execution (optional)	New, New	
Partial Filled	Execution	New, Partial	
Cancel Replace(X,Y)	Execution	New, Replaced(X)	
Partial Filled	Execution	New, Partial(Y)	
Cancel Replace(Y,Z)	Execution	New, Replaced(Y)	
Filled (Z)	Execution	New, Filled(Z)	
Cancel Replace(Z)	Cancel Reject		(To Late To Cancel)
Cancel Replace(T)	Cancel Reject		(Unknown Order)

Order Cancel Request:

RECV MSG/EVENT	MESSAGE SENT	EXECTRANTYPE ORDSTATUS	CANREJREASON
NewOrder	Execution (optional)	New, New	
Cancel Request(F)	Cancel Reject		(Unknown Order)
Cancel Request(F)	Cancel Reject		(Tltc)
Cancel Request(F)	Execution	New, Cancel	
Cancel Request(F)	Execution	New, Partial	
	Cancel Reject		(Tltc)
Cancel Request(F)	Execution	New, Filled	
	Cancel Reject		(Tltc)
Cancel Request(P)	Execution	New, Cancel	